

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
 United States Patent and Trademark  
 Office  
 Box PCT  
 Washington, D.C. 20231  
 ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 28 September 1999 (28.09.99)	<b>Applicant's or agent's file reference</b> SMC/LF/P3997
<b>International application No.</b> PCT/GB98/02166	<b>Priority date</b> (day/month/year) 05 February 1998 (05.02.98)
<b>International filing date</b> (day/month/year) 20 July 1998 (20.07.98)	
<b>Applicant</b> AUSTIN, Kenneth	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 01 September 1999 (01.09.99)

☐ in a notice effecting later election filed with the International Bureau on:  
 \_\_\_\_\_

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	Authorized officer  Lazar Joseph Panakal  Telephone No.: (41-22) 338.83.38
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# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

ROYSTONS  
Tower Building  
Water Street  
Liverpool, Merseyside L3 1BA  
GRANDE BRETAGNE

## PCT

### WRITTEN OPINION

(PCT Rule 66)

Date of mailing (day/month/year)		<b>0 6. 12. 99</b>
Applicant's or agent's file reference <b>SMC/IR/P3997</b>		<b>REPLY DUE</b> <b>within 2 month(s)</b> from the above date of mailing
International application No. <b>PCT/GB98/02166</b>	International filing date (day/month/year) <b>20/07/1998</b>	Priority date (day/month/year) <b>05/02/1998</b>
International Patent Classification (IPC) or both national classification and IPC <b>G11B27/10</b>		
Applicant <b>DANMERE LIMITED et al.</b>		

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I    ☒ Basis of the opinion
  - II   ☐ Priority
  - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV   ☐ Lack of unity of invention
  - V    ☐ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI   ☐ Certain document cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
 

**When?**      See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?**        By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:**        For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: **05/06/2000.**

Name and mailing address of the international preliminary examining authority:

European Patent Office  
D-80298 Munich  
Tel. +49 89 2339 - 0 Tx: 523856 epmu d  
Fax: +49 89 2339 - 4465

Authorized officer / Examiner

**Schepens, A**

Formalities officer (incl. extension of time limits)  
**Gazzoli, M**  
Telephone No. +49 89 2399 2815



## WRITTEN OPINION

International application No. PCT/GB98/02166

### I. Basis of the opinion

1. This opinion has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed")*:

#### Description, pages:

1-34 as originally filed

#### Claims, No.:

1-48 as originally filed

#### Drawings, sheets:

1/11-11/11 as originally filed

### 2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c));

### 4. Additional observations, if necessary:

### III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

- ☒ the entire international application,
- ☐ claims Nos. ,

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

**WRITTEN OPINION**

International application No. PCT/GB98/02166

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- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

**WRITTEN OPINION  
SEPARATE SHEET**

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International application No. PCT/GB98/02166

Although claims 1, 17, 21, 22, 31, 34, 35, 37, 40, 41, 43, 44 and 48 have been drafted as separate independent apparatus claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought ..and/or.. in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, the independent claims mentioned above do not meet the requirements of Article 6 PCT.

In view of this large number of independent claims lacking conciseness it is not at present practicable to carry out a full examination of the application. A full examination is only possible if the number of independent claims is reduced to the minimum. In the present case it would appear appropriate to file an amended set of claims defining the relevant subject-matter in terms of a single independent claim followed by dependent claims covering features which are merely optional (Rule 6.4 PCT). The applicant is therefore suggested to file suitable amendments upon which the further prosecution of the application is to be based. When drafting such new claims it is suggested to take the citations in the category X of the search report into account and, eventually, comment on them.



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Europäisches  
Patentamt

Generaldirektion 2

European  
Patent Office

Directorate General 2

Office européen  
des brevets

Direction Générale 2

## Correspondence with the EPO on PCT Chapter II demands



In order to ensure that your PCT Chapter II demand is dealt with as promptly as possible you are requested to use the enclosed self-adhesive labels with any correspondence relating to the demand sent to the Munich Office.

One of these labels should be affixed to a prominent place in the upper part of the letter or form etc. which you are filing.

# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>SMC/IR/P3997</b>		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. <b>PCT/GB98/02166</b>	International filing date (day/month/year) <b>20/07/1998</b>	Priority date (day/month/year) <b>05/02/1998</b>	
International Patent Classification (IPC) or national classification and IPC <b>G11B27/10</b>			
Applicant <b>DANMERE LIMITED et al.</b>			
<p>1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 9 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 9 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input checked="" type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li> <li>VIII <input checked="" type="checkbox"/> Certain observations on the international application</li> </ul>			
Date of submission of the demand  <b>01/09/1999</b>		Date of completion of this report  <b>13.07.00</b>	
Name and mailing address of the international preliminary examining authority:  <b>European Patent Office</b> <b>D-80298 Munich</b> <b>Tel. +49 89 2399 - 0 Tx: 523658 spmu d</b> <b>Fax: +49 89 2399 - 4465</b>		Authorized officer  <b>Schepens, A</b>  Telephone No. <b>+49 89 2399 2627</b> 	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/02166

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

1-34 as originally filed

**Claims, No.:**

1-47 as received on 24/03/2000 with letter of 20/03/2000

**Drawings, sheets:**

1/11-11/11 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☒ the claims, Nos.: 48  
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.  
☒ claims Nos. 33-35.

because:



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB98/02166**

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 33-35 are so unclear that no meaningful opinion could be formed (*specify*):
- see separate sheet**
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. .

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/02166

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims 1-32,36-7
	No:	Claims
Inventive step (IS)	Yes:	Claims
	No:	Claims 1-32,36-47
Industrial applicability (IA)	Yes:	Claims 1-32,36-47
	No:	Claims

**2. Citations and explanations**

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB98/02166

Point III:

1. The scope of the omnibus claims 33-35 is so unclear that no opinion can be given. Especially, they do not comply with Rule 6.2(a) (compare PCT Guidelines GL3, III 4.10).

Point IV:

2. Independent claims 1, 36, 39, 43 and 47 have only in common a video recorder (in fact in claim 43 not even that). As a video recorder is commonly known, the common subject matter of these claims lack novelty. Therefore, the requisite unity of invention (Rule 13.1 PCT) no longer exists inasmuch as a technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of claims:

Claims 1-32 relating to video media content, position, available recording time and menu selection.

Claims 36-38 relating to the determination whether a video recorder is powered on or not.

Claims 39-42 relating to selective enabling and disabling of functions.

Claims 43-46 relating to a graphical interface for visual presentation of content data.

Claim 47: relating to the use of subtitling or close caption data.

Point V:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB98/02166

3. Reference is made to the following documents:

D1: DE-A-3 621 263  
D2: EP-A-0 526 727  
D3: EP-A-0 731 469  
D4: US-A-4 989 104  
D5: US-A-5 488 409  
D6: EP-A-0 692 790  
D7: US-A-5 546 191  
D8: US-A-5 440 400

4. D1 discloses a (digital) video recorder wherein in between the video data information blocks are recorded containing a list of titles together with their positions (Col. 6, lines 42-52). These data can be displayed on the TV screen (Col. 10, lines 33-40). Tape position determining means are provided (Col. 7, lines 27-32). Furthermore, means for determining the remaining recording time (Col. 6, lines 1-5). Furthermore, the video signal and the title information are derived from the same (digital) output; they only differ in coding format (Col. 6, lines 59-68).

Thus, the subject matter of claim 1 differs from the disclosure of D1 in that the available recording time is calculated using unrecorded portions as well as portions selected as available for recording over.

D2 discloses the principle of determining the available recording time using unrecorded portions as well as portions selected as available for recording over (Col. 7, lines 23-35).

The feature defining how the available recording time is determined has no functional relationship with the features defining how the media content and positions are determined; there is no synergistic effect. Hence, it is obvious to apply the available recording time calculation technique of D2 to the video recorder of D1.

Thus, the subject matter of claim 1 is obvious.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB98/02166

As far as the reference to the conventional video output terminal in the last line of claim 1 could be interpreted as defining another output than is used in D1, it is noted that this characterizing feature of claim 1 merely represents an obvious desideratum. The wish to be able to determine tape position and content on the basis of the video signal itself is obvious.

In this respect it is also noted that the characterizing feature of claim 1 must be interpreted as covering the writing of data in the vertical sync interval (teletext) because such is defined in dependent claim 2. The use of this interval for such purpose is conventional; compare D6, column 4, lines 11-14 and D5, abstract, lines 3-6.

5. Dependent claims 2, 4-15, 27, 30-32 and 40-42 define additional features being commonly known. Hence, the subject matter of these claims is obvious too.

With respect to claim 42 reference is also made to D4, figure 2 disclosing to store content data for a plurality of cassettes.

6. Claim 20 covers the conventional search technique of comparing a time code derived from the tape (eventually in the vertical interval) with a target time code.

Hence, the subject matter of claim 20 is obvious.

Besides, the use of a match between picture data derived from the tape and stored picture data is known. Compare D8, abstract.

7. Claim 21, 22, 24-26, 28 and 29 define use of on screen displayed images for the selection of a video title.

Such display of a selection menu is known from D7, abstract and D3, Col. 3, lines 18-27.

With respect to claim 29 reference is made to D2 disclosing, column 5, lines 40-45 disclosing the principle to mark portions available for recording over.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB98/02166

Hence, the subject matter of these claims is obvious.

8. Claim 23 adds to the subject matter of claim 20 the feature that the programm to be recorded is selected from an electronic programming guide. This feature is disclosed in D1, Col. 4, lines 67-68.

Hence, the subject matter of claim 22 is obvious.

9. Claim 36 defines to decide that the video recorder is powered on by detecting the presence or absence of signals is trivial. Any person seeing that there is no image on the screen will consider the possibility that he has forgotten to power on the video recorder. This also applies to claims 37-39.
10. Claim 43-46 merely define a teletext decoder because in teletext also programm data is presented.
11. Claim 47 relates to the search for a match in close caption data. Such is known as such from D8, abstract.
12. Claims 3 and 16-19 cover the use of a match between a target time code and a time code in the vertical interval of the video signal for searching purposes.

With respect to the reference to the storage of title information of a plurality of media, reference is made to D4, figure 2. With respect to the storage of image data reference is made to D3 and D7.

Hence, the subject matter of these claims is obvious.

Point VII:

13. As no basis could be found for the introduction of the feature "on the conventional video output terminal" in claim 1, it is considered that the amendments filed with the International Bureau under Article 19(1) introduce subject-matter which

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB98/02166

extends beyond the content of the application as filed, contrary to Article 19(2) PCT.

14. The independent claims are not in the correct two-part form in accordance with Rule 6.3(b) PCT, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
15. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
16. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D8 are not mentioned in the description, nor are these documents identified therein.
17. The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

Point VIII:

18. The feature "conventional video" in claim 1 renders the scope of the claims unclear. Firstly there are various "conventional" video formats (RGB, RF, MPEG etc), secondly, the scope of "conventional" changes with time.

PCT

NOTICE INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

ROYSTONS  
Tower Building  
Water Street  
Liverpool L3 1BA  
ROYAUME-UNI

Date of mailing (day/month/year) 12 August 1999 (12.08.99)		
Applicant's or agent's file reference SMC/LF/P3997		IMPORTANT NOTICE
International application No. PCT/GB98/02166	International filing date (day/month/year) 20 July 1998 (20.07.98)	Priority date (day/month/year) 05 February 1998 (05.02.98)
Applicant DANMERE LIMITED et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:  
AU,CN,EP,IL,JP,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:  
AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CU,CZ,DE,DK,EA,EE,ES,FI,GB,GE,GH,GM,HR,HU,ID,  
IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,  
SI,SK,SL,TJ,TM,TR,TT,UA,UG,UZ,VN,YU,ZW  
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on  
12 August 1999 (12.08.99) under No. WO 89/40587

## REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 18 months from the priority date.

It is the applicant's sole responsibility to monitor the 18-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

## REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer J. Zahra
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38



## PATENT COOPERATION TREATY

PCT

INFORMATION CONCERNING ELECTED  
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

From the INTERNATIONAL BUREAU

To:

ROYSTONS  
Tower Building  
Water Street  
Liverpool L3 1BA  
ROYAUME-UNI

Date of mailing (day/month/year)

28 September 1999 (28.09.99)

Applicant's or agent's file reference

SMC/LF/P3997

## IMPORTANT INFORMATION

International application No.

PCT/GB98/02166

International filing date (day/month/year)

20 July 1998 (20.07.98)

Priority date (day/month/year)

05 February 1998 (05.02.98)

Applicant

DANMERE LIMITED et al

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

AP : GH, GM, KE, LS, MW, SD, SZ, UG, ZW

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

National : AU, BG, BR, CA, CN, CZ, DE, GB, IL, JP, KP, KR, MN, NO, NZ, PL, RO, RU, SE, SK, US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

National : AL, AM, AT, AZ, BA, BB, BY, CH, CU, DK, EE, ES, FI, GE, GH, GM, HR, HU, ID, IS, KE,  
KG, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MW, MX, PT, SD, SG, SI, SL, TJ, TM, TR, TT, UA,  
UG, UZ, VN, YU, ZW

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer:

Lazar Joseph Pankal

Telephone No. (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

REC'D 18 JUL 2000

WIPO

PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SMC/IR/P3997		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) <b>FOR FURTHER ACTION</b>
International application No. PCT/GB98/02166	International filing date (day/month/year) 20/07/1998	Priority date (day/month/year) 05/02/1998
International Patent Classification (IPC) or national classification and IPC G11B27/10		
Applicant DANMERE LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 9 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 9 sheets.



3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

RECEIVED

DEC 06 2000

Technology Center 2600

Date of submission of the demand  01/09/1999	Date of completion of this report  13.07.00
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Schepens, A  Telephone No. +49 89 2399 2627 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB98/02166

**I. Basis of the report**

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

**Description, pages:**

1-34 as originally filed

**Claims, No.:**

1-47 as received on 24/03/2000 with letter of 20/03/2000

**Drawings, sheets:**

1/11-11/11 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☒ the claims, Nos.: 48  
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.  
☒ claims Nos. 33-35.

because:

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☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 33-35 are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. .

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-32,36-7
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-32,36-47
Industrial applicability (IA)	Yes:	Claims	1-32,36-47
	No:	Claims	

**2. Citations and explanations**

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

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Point III:

1. The scope of the omnibus claims 33-35 is so unclear that no opinion can be given. Especially, they do not comply with Rule 6.2(a) (compare PCT Guidelines GL3, III 4.10).

Point IV:

2. Independent claims 1, 36, 39, 43 and 47 have only in common a video recorder (in fact in claim 43 not even that). As a video recorder is commonly known, the common subject matter of these claims lack novelty. Therefore, the requisite unity of invention (Rule 13.1 PCT) no longer exists inasmuch as a technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of claims:

Claims 1-32 relating to video media content, position, available recording time and menu selection.

Claims 36-38 relating to the determination whether a video recorder is powered on or not.

Claims 39-42 relating to selective enabling and disabling of functions.

Claims 43-46 relating to a graphical interface for visual presentation of content data.

Claim 47: relating to the use of subtitling or close caption data.

Point V:

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3. Reference is made to the following documents:

D1: DE-A-3 621 263  
D2: EP-A-0 526 727  
D3: EP-A-0 731 469  
D4: US-A-4 989 104  
D5: US-A-5 488 409  
D6: EP-A-0 692 790  
D7: US-A-5 546 191  
D8: US-A-5 440 400

4. D1 discloses a (digital) video recorder wherein in between the video data information blocks are recorded containing a list of titles together with their positions (Col. 6, lines 42-52). These data can be displayed on the TV screen (Col. 10, lines 33-40). Tape position determining means are provided (Col. 7, lines 27-32). Furthermore, means for determining the remaining recording time (Col. 6, lines 1-5). Furthermore, the video signal and the title information are derived from the same (digital) output; they only differ in coding format (Col. 6, lines 59-68).

Thus, the subject matter of claim 1 differs from the disclosure of D1 in that the available recording time is calculated using unrecorded portions as well as portions selected as available for recording over.

D2 discloses the principle of determining the available recording time using unrecorded portions as well as portions selected as available for recording over (Col. 7, lines 23-35).

The feature defining how the available recording time is determined has no functional relationship with the features defining how the media content and positions are determined; there is no synergistic effect. Hence, it is obvious to apply the available recording time calculation technique of D2 to the video recorder of D1.

Thus, the subject matter of claim 1 is obvious.

As far as the reference to the conventional video output terminal in the last line of claim 1 could be interpreted as defining another output than is used in D1, it is noted that this characterizing feature of claim 1 merely represents an obvious desideratum. The wish to be able to determine tape position and content on the basis of the video signal itself is obvious.

In this respect it is also noted that the characterizing feature of claim 1 must be interpreted as covering the writing of data in the vertical sync interval (teletext) because such is defined in dependent claim 2. The use of this interval for such purpose is conventional; compare D6, column 4, lines 11-14 and D5, abstract, lines 3-6.

5. Dependent claims 2, 4-15, 27, 30-32 and 40-42 define additional features being commonly known. Hence, the subject matter of these claims is obvious too.

With respect to claim 42 reference is also made to D4, figure 2 disclosing to store content data for a plurality of cassettes.

6. Claim 20 covers the conventional search technique of comparing a time code derived from the tape (eventually in the vertical interval) with a target time code.

Hence, the subject matter of claim 20 is obvious.

Besides, the use of a match between picture data derived from the tape and stored picture data is known. Compare D8, abstract.

7. Claim 21, 22, 24-26, 28 and 29 define use of on screen displayed images for the selection of a video title.

Such display of a selection menu is known from D7, abstract and D3, Col. 3, lines 18-27.

With respect to claim 29 reference is made to D2 disclosing, column 5, lines 40-45 disclosing the principle to mark portions available for recording over.



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Hence, the subject matter of these claims is obvious.

8. Claim 23 adds to the subject matter of claim 20 the feature that the program to be recorded is selected from an electronic programming guide. This feature is disclosed in D1, Col. 4, lines 67-68.

Hence, the subject matter of claim 22 is obvious.

9. Claim 36 defines to decide that the video recorder is powered on by detecting the presence or absence of signals is trivial. Any person seeing that there is no image on the screen will consider the possibility that he has forgotten to power on the video recorder. This also applies to claims 37-39.
10. Claim 43-46 merely define a teletext decoder because in teletext also program data is presented.
11. Claim 47 relates to the search for a match in close caption data. Such is known as such from D8, abstract.
12. Claims 3 and 16-19 cover the use of a match between a target time code and a time code in the vertical interval of the video signal for searching purposes.

With respect to the reference to the storage of title information of a plurality of media, reference is made to D4, figure 2. With respect to the storage of image data reference is made to D3 and D7.

Hence, the subject matter of these claims is obvious.

Point VII:

13. As no basis could be found for the introduction of the feature "on the conventional video output terminal" in claim 1, it is considered that the amendments filed with the International Bureau under Article 19(1) introduce subject-matter which

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extends beyond the content of the application as filed, contrary to Article 19(2) PCT.

14. The independent claims are not in the correct two-part form in accordance with Rule 6.3(b) PCT, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
15. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
16. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D8 are not mentioned in the description, nor are these documents identified therein.
17. The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

Point VIII:

18. The feature "conventional video" in claim 1 renders the scope of the claims unclear. Firstly there are various "conventional" video formats (RGB, RF, MPEG etc), secondly, the scope of "conventional" changes with time.

**CLAIMS**

1. A video storage media control system comprising means operable to control a video media storage device, means for determining video media position, means for identifying the contents of the video media and the position thereof on the media, means for determining the amount of media available for recording, be it unrecorded media or portions thereof selected as available for recording over, and means providing display of control menus from which video media storage device control options can be selected including selection of material to be recorded and characterised in that the means for determining video media position and the means for identifying the contents of the video media are based on signals present on the conventional video output terminal.
2. A video storage media control system as claimed in claim 1 in which the video media position is determined by reading position data recorded on the video storage media.
3. A video storage media control system as claimed in claim 1 in which the video media position is determined by establishing a match or relationship between a data sequence or data value generated from contents of the media with data sequences or a data value stored in the memory for one or more video media to which data sequences or a data value incorporate position related information.
4. A video storage media control system as claimed in claims 1, 2, or 3 further comprising means for automatically controlling the video media storage device transport functions to locate a desired position on the video media storage device.

5. A control system as claimed in anyone of claims 1 to 4 in which the video media storage device is a tape storage device.
6. A control system according to claim 5 in which the means for determining video media (tape) position is based on signals or data received from a tape reading means.
7. A control system as claimed in anyone of the preceding claims in which control is instigated using an infrared control signal.
8. A control system as claimed in anyone of claims 5, 6 or 7 further comprising means for encoding the data to be recorded onto the tape at prescribed intervals.
9. A control system as claimed in claim 8 in which the data comprises one or more of time code, frame number, total frames and session name.
10. A control system as claimed in anyone of claims 5 to 9 in which the data is recorded in selected Vertical Blanking Intervals.
11. A control system as claimed in anyone of the preceding claims in which the tape is automatically repositioned to a selected desired position utilising characterisation data determined for the tape storage device.
12. A control system as claimed in anyone of claims 5 to 11 and further comprising recording onto the tape an index of material recorded on the tape which provides readable information identifying the nature of the recorded material and its position the tape.
13. A control system as claimed in claim 12 in which multiple file indexes are recorded on the tape, one after each recording session.
14. A control system as claimed in claim 13 in which the successive file indexes are cumulative.

15. A control system as claimed in anyone of claims 5 to 14 comprising memory means external to the tape for holding the content of at least one file index.
16. A video control system as claimed in claim 3 in which the signals received from the reading means are the video output signals of the video recorder which represent contents of the video media, be it the visible content, audio content or close caption data or other signals recorded on the video media, and any of said contents are used to generate a data sequence or data value from which tape position is determined by comparing said data sequence or data value with data sequences or a data value stored in memory.
17. A video control system as claimed in claim 16 in which the data sequences or data value for a plurality of video media are stored in memory.
18. A video control system as claimed in claims 16 or 17 in which at least some of the data sequences or the data value stored in memory have appended thereto data which facilitates reproduction of the image of at least one frame of the sequence.
19. A video control system as claimed in claims 17 or 18 in which the memory contains stored images of a plurality of frames taken at intervals along the video media.
20. A video stage media control system as claimed in anyone of claims 1 to 19, comprising means for sending commands to the apparatus to instigate positioning of the video media at a desired position, and wherein the desired position is arrived at automatically by reading the video media to obtain position information by establishing a match or relationship between a data sequence or data value generated from contents of the media with data sequences or a data value stored in the memory for one or more video media, which data sequences or a data value

incorporate position related information and changing the position of the video media until the desired position has been obtained.

21. A video media control system as claimed in anyone of claims 1 to 19 comprising means for sending commands to the apparatus to instigate positioning of the video media at a desired position, which position is selected from an on screen display, which display comprises one or more screen images of the contents of the video media and wherein the desired position is arrived at automatically by reading the video media to obtain position information, direction or indirectly, and changing the position of the video media until the desired position has been obtained.
22. A video media control system as claimed in claim 21 in which the contents are stored in electronic memory or on video storage media, be it magnetic or optical, the index comprising a plurality of images corresponding to each of the contents of the video storage medium at different positions thereof and wherein the index is adapted to be read and displayed on a television screen, enabling the selection of one or more of a plurality of scenes of the recorded content.
23. A video storage media control system as claimed in anyone of the preceding claims in which selection of the material to be recorded is selected from an electronic programming guide.
24. A video storage media control system as claimed in anyone of the preceding claims in which the contents of the video media are stored in memory in the form of one or more images taken at intervals and images which are available for display on screen.

25. A video storage media control system as claimed in claims 21, 22 or 24 in which each image has an associated sequence of images stored in memory which can be reviewed by a user command.
26. A video storage media control system as claimed in anyone of claims 21 to 25 in which the images comprise a sample of the contents of the video media at periodic intervals of the video medium.
27. A video storage media control system as claimed in anyone of claims 21 to 26 in which the contents of the memory tape include audio signals.
28. A video storage media control system as claimed in anyone of the preceding claims in which selection provisions allow a user to playback the video starting from the position of any one of the display images.
29. A video storage media control system as claimed in anyone of the preceding claims in which selection provisions allow the user to mark the displayed images for recording over.
30. A video storage media control system as claimed in anyone of the preceding claims for programming a video storage media device from selections made in a electronic programming guide comprising the steps of: - (1) issuing the necessary commands to the video storage media device to enable it to play the associated media, (2) reading the video media to determine the contents and/or position thereof, (3) using content and/or position related information to determine if sufficient room is available for recording the selections, (4) using the necessary commands to cause said video storage media device to record material based on said selections at a designated position of the media based on calculations of the free space or space marked for overwriting and wherein the contents and/or

position of the video media are determined from signals present on the conventional video output terminal.

31. A video storage media control system as claimed in claim 30 in which the contents and/or position related information is determined by reading data recorded on the tape.
32. A video storage media control system as claimed in claim 30 in which the contents and/or position related information is determined by comparing or verifying a relationship between a sequence of data signals or a data value generated by reading the contents of the tape with a pre-stored sequence of data signals or data value.
33. A video storage media control system constructed and arranged and adapted to operate substantially as hereinbefore described with reference to anyone of the accompanying drawings.
34. A video tape control system substantially as hereinbefore described with reference to the accompanying drawings.
35. A storage video tape recorded with data and/or file indexes substantially as hereinbefore described and illustrated in the accompanying drawings.
36. A closed loop video recorder or other media device control system for determining the status of a video recorder or other media device, consisting of the steps of, (1) issuing a play command or code or sequence, (2) verifying that signals or data are received, (3) using said signals or data or absence of signals or data to determine if said video recorder or other media device is powered on.



37. A close loop control system as claimed in claim 36 further comprising the steps of, (1) checking that the tape or media position is substantially unchanged from a predetermined position, (2) issuing a record command or code or sequence.
38. A closed loop control system as claimed in 36 or 37 further comprising the step of verifying the signals or data received from said video recorder or other media device correspond to a selected program designated for recording.
39. A system for controlling a video recorder or other media device for selective enabling and disabling of associated functions, comprising the steps of, (1) periodically assessing the presence or content of signals and/or data output from said video recorder or other media device to determine if device is operating, (2) determining if said video recorder or other media device is scheduled and/or permitted to operate at time of assessing signals and/or data, (3) if required issuing a command or code or sequence to disable said video recorder or other media device by a power off command and/or a stop command and/or a pause or other command.
40. A system as claimed in anyone of claims 1 to 19 comprising a graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and video recorder or other media device content, wherein selections are made from said television program content and/or data content from other sources for recording onto video tape or other media whereby calculation of available free space on said video tape or other media is displayed and whereby if insufficient space is available for recording original selections may be modified and/or some or all of the video tape or other media contents may be selected for overwriting.

41. A system as claimed in 40 in which the graphical user interface is adapted to display the status of items recorded on video tape or other media as to whether the recorded item has been viewed.
42. A system as claimed in claims 40 or 41 in which the graphical user interface is adapted to display information relating to one or more video tapes or other media contents, wherein the contents of said video tape or other media is displayed either graphically or texturally according to the category of the recorded material, said category could be the type of recorded material or whether the item is suitable for a particular age of viewer or whether the items have been viewed or any other criteria.
43. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content, wherein said display information comprises a visual representation such as a picture indicating the contents of said television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content.
44. A graphical user interface as claimed in claim 43 in which said visual representations are stored in memory, at least temporarily, to permit on screen display.
45. A graphical user interface as claimed in claim 43 or 44 wherein the graphical user interface is adapted to display television program content information by category such as what is currently showing and/or what will be showing next and/or what is showing that day and/or what will be showing that week.

46. A graphical user interface adapted to display information as claimed in claims 43, 44 or 45 further adapted to filter said television program content by category of user preference such as channel number or type of television program or other category.
47. A video recorder or other media device index generation method comprising the steps of, (1) recording a television broadcast, (2) recording in a memory means a copy of subtitling or closed caption data, (3) using said subtitling or closed caption data to search for key words or phrases to identify a scene from one or more video tapes or other media corresponding to said key word, (4) issuing a command or code or sequence to position said video tape or other media at the scene corresponding to said key word.

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION  
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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>G11B 27/10, 15/02, H04N 5/775, G11B 27/029, 15/04, 27/32, 27/30, 27/11, 27/34, 27/36</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 99/40587</b> <b>(43) International Publication Date:</b> 12 August 1999 (12.08.99)
<b>(21) International Application Number:</b> PCT/GB98/02166 <b>(22) International Filing Date:</b> 20 July 1998 (20.07.98) <b>(30) Priority Data:</b> 9802415.1                      5 February 1998 (05.02.98)                      GB <b>(71) Applicant (for all designated States except US):</b> DANMERE LIMITED [GB/GB]; Whitehall, 75 School Lane, Hartford, Northwich, Cheshire CW8 1PF (GB). <b>(72) Inventor; and</b> <b>(75) Inventor/Applicant (for US only):</b> AUSTIN, Kenneth [GB/GB]; Weaverham Grange, 7 Beechwood Avenue, Hartford, Northwich, Cheshire CW8 3AR (GB). <b>(74) Agent:</b> ROYSTONS; Tower Building, Water Street, Liverpool L3 1BA (GB).		<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>
<b>(54) Title:</b> VIDEO MEDIA CONTROL SYSTEM  <b>(57) Abstract</b>  A video media storage control system to control a video media storage device, be it for a tape or other storage media, includes means for sending commands to the device to instigate positioning of the video media at a desired position and where the desired position is arrived at automatically by reading the video media to obtain position information, directly or indirectly, and changing the position of the video media until the desired position has been obtained. Positioning may be for record or playback purposes. According to one aspect of the invention selection of the desired position at least for playback is controlled selectively from a display of the index of contents of the video media, which display includes at least one image of the contents and preferably a plurality of images on the media taken at discrete intervals. Positioning of the video media may utilise characterisation data for the video media storage device. More particularly the position information is obtained by reading position data recorded on the tape or alternatively by generating position data from the contents of the video tape for example by reading the tape and generating a data sequence or data value derived from the contents of the tape and storing same in memory in conjunction with position information.		

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# INTERNATIONAL SEARCH REPORT

Internat'l Application No  
PCT/GB 98/02166

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 G11B27/10 G11B15/02 H04N5/775 G11B27/029 G11B15/04  
G11B27/32 G11B27/30 G11B27/11 G11B27/34 G11B27/36

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G11B H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 488 409 A (YUEN HENRY C ET AL) 30 January 1996	1-14, 17-22, 31-37, 40,41, 43,48
Y	see the whole document	15,16
A	---	44
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 December 1998

Date of mailing of the international search report

11/12/1998

Name and mailing address of the ISA

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Authorized officer

Daalmans, F

Internat	Application No
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Form PCT/SA/210 (continuation of second sheet) (July 1992)

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 36171 A (INDEX SYSTEMS INC;KWOH DANIEL S ; YUEN HENRY C (US)) 14 November 1996  see the whole document ---	1-22,28, 31-37, 40,41, 43,44, 46,48
A	US 4 989 104 A (SCHUELEIN REINHARD ET AL) 29 January 1991  see the whole document ---	1,2,4,6, 8,9, 12-14, 17-23, 31-37, 40,43, 44,48
A	US 5 440 400 A (MICHERON FRANCOIS ET AL) 8 August 1995  see the whole document ---	1,2,12, 13,17, 19-23, 31, 33-37,40
A	EP 0 322 909 A (HITACHI LTD) 5 July 1989  see the whole document ---	1-3,5,6, 17,21, 22,31, 32, 34-37, 40,41, 43,44,48
A	EP 0 526 727 A (GRUNDIG EMV) 10 February 1993  see the whole document ---	1,2,4,6, 8,17,18, 20-22, 31,32, 34-37,40
A	GB 2 208 142 A (HASHIMOTO CORP) 1 March 1989  see the whole document ---	1-3,8, 12,17, 18,20, 31, 34-37,40
A	DE 36 21 263 A (STANDARD ELEKTRIK LORENZ AG) 7 January 1988  see the whole document -----	1,5,6, 9-11,17, 21,48



# INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat: Application No

PCT/GB 98/02166

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5488409	A	30-01-1996	AU 7874294 A	10-04-1995
			WO 9508822 A	30-03-1995
			US 5581614 A	03-12-1996
			US 5621579 A	15-04-1997
			US 5724203 A	03-03-1998
			AU 6021394 A	15-08-1994
			CA 2153259 A	21-07-1994
			CN 1119049 A	20-03-1996
			EP 0746851 A	11-12-1996
			JP 8505729 T	18-06-1996
			SG 52697 A	28-09-1998
			WO 9416441 A	21-07-1994
			AU 670039 B	04-07-1996
			AU 2540692 A	16-03-1993
			BR 9206393 A	20-06-1995
			CA 2115771 A	04-03-1993
			EP 0600006 A	08-06-1994
			HU 76499 A	29-09-1997
			JP 6510154 T	10-11-1994
			NO 940536 A	19-04-1994
			WO 9304473 A	04-03-1993
EP 0692790	A	17-01-1996	JP 8032922 A	02-02-1996
			CN 1121621 A	01-05-1996
			US 5761371 A	02-06-1998
US 5546191	A	13-08-1996	EP 0558306 A	01-09-1993
			JP 6168545 A	14-06-1994
EP 0731469	A	11-09-1996	CN 1137154 A	04-12-1996
			JP 8315546 A	29-11-1996
EP 0841664	A	13-05-1998	DE 19646127 C	20-05-1998
WO 9636171	A	14-11-1996	AU 5575496 A	29-11-1996
			CA 2219220 A	14-11-1996
			EP 0823178 A	11-02-1998
US 4989104	A	29-01-1991	DE 3628743 A	25-02-1988
			AT 115323 T	15-12-1994
			DE 3750831 D	19-01-1995
			EP 0257534 A	02-03-1988
			JP 63087689 A	18-04-1988
US 5440400	A	08-08-1995	FR 2652696 A	05-04-1991
			AT 123198 T	15-06-1995
			AU 6526790 A	28-04-1991
			DE 69019729 D	29-06-1995
			DE 69019729 T	30-11-1995
			EP 0446334 A	18-09-1991
			ES 2078354 T	16-12-1995
			WO 9105437 A	18-04-1991
			JP 4502098 T	09-04-1992
EP 0322909	A	05-07-1989	JP 1175471 A	11-07-1989
EP 0526727	A	10-02-1993	DE 4125848 A	04-02-1993

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat'l Application No

PCT/GB 98/02166

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2208142 A	01-03-1989	JP 1010482 A	13-01-1989
		HK 22795 A	03-03-1995
		SG 3595 G	16-06-1995
		US 4873584 A	10-10-1989
DE 3621263 A	07-01-1988	NONE	

## CLAIMS

1. A video tape control system comprising means operable to control a tape storage device means for determining tape position based on signals or data received from a tape reading means, means for identifying the contents of the tape and their position on the tape, means for determining the amount of tape available for recording, be it unused tape or portions of the tape selected as available to be written over, and means providing display of control menus for which tape storage device control option can be selected including selection of the material to be recorded.
2. A video tape control system as claimed in claim 1 and further comprising means for automatically controlling tape storage device transport functions to locate a desired position on the tape.
3. A video tape control system as claimed in claims 1 or 2 in which tape control is instigated using an infra-red control signal.
4. A video tape control system as claimed in anyone of claims 1, 2 or 3 in which the signals from the tape reading means, comprise data has previously been encoded onto the tape.
5. A tape control system as claimed in claim 4 further comprising means for encoding the data to be recorded onto the tape at prescribed intervals.
6. A tape control system as claimed in claims 4 or 5 in which the data comprises one or more of time code, frame number, total frames and session name.
7. A tape control system as claimed in anyone of claims 4, 5 or 6 in which the

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data is recorded in selected Vertical Blanking Intervals.

8. A tape control system as claimed in anyone of the preceding claims in which the tape is automatically repositioned to a selected desired position utilising characterisation data determined for the tape storage device.
9. A tape control system as claimed in anyone of the preceding claims and further comprising recording onto the tape an index of material recorded on the tape which provides readable information identifying the nature of the recorded material and its position on the tape.
10. A tape control system as claimed in claim 9 in which multiple file indexes are recorded on the tape, one after each recording session.
11. A tape control system as claimed in claim 10 in which the successive file indexes are cumulative.
12. A tape control system as claimed in anyone of the preceding claims comprising memory means external to the tape for holding the content of at least one file index.
13. A video tape control system as claimed in anyone of claims 1, 2 or 3 in which the signals received from the tape reading means are the contents of the tape, be it the visible content, audio content or close caption data or other signals recorded on the tape, and any of said contents are used to generate a data sequence or data value from which tape position is determined by comparing said data sequence or data value with data sequences or a data value stored in memory.
14. A video tape control system as claimed in claim 13 in which the data

sequences or data value for a plurality of tapes are stored in memory.

15. A video tape control system as claimed in claims 13 or 14 in which at least some of the data sequences or the data value stored in memory have appended thereto data which facilitates reproduction of the image of at least one frame of the sequence.
16. A video tape control system as claimed in claims 14 or 15 in which the memory contains stored images of a plurality of frames taken at intervals along the video tape.
17. A video storage media control system comprising means operable to control a video media storage device, means for determining video media position, means for identifying the contents of the video media and the position thereof on the media, means for determining the amount of media available for recording, be it unrecorded media or portions thereof selected as available for recording over, and means, providing display of control menus from which video media storage device control options can be selected including section of material to be recorded.
18. A video storage media control system as claimed in claim 17 in which the video media position is determined by reading position data recorded on the tape.
19. A video storage media control system as claimed in claim 17 in which the video media position is determined by establishing a match or relationship between a data sequence or data value generated from contents of the media with data sequences or a data value stored in the memory for one or more

video media to which data sequences or a data value incorporate position related information.

20. A video storage media control system as claimed in claims 17, 18 or 19 further comprising means for automatically controlling the video media storage device transport functions to locate a desired position on the tape.
21. A video media control system comprising apparatus for controlling video media position, means for sending commands to the apparatus to instigate positioning of the video media at a desired position, and wherein the desired position is arrived at automatically by reading the video media to obtain position information by establishing a match or relationship between a data sequence or data value generated from contents of the media with data sequences or a data value stored in the memory for one or more video media, which data sequences or a data value incorporate position related information and changing the position of the video media until the desired position has been obtained.
22. A video media control system comprising apparatus for controlling video media position, means for sending commands to the apparatus to instigate positioning of the video media at a desired position, which position is selected from an on screen display, which display comprises one or more screen images of the contents of the video media and wherein the desired position is arrived at automatically by reading the video media to obtain position information, direction or indirectly, and changing the position of the video media until the desired position has been obtained.

23. A video media control system as claimed in claim 22 in which the contents are stored in electronic memory or on video storage media, be it magnetic or optical, the index comprising a plurality of images corresponding to each of the contents of the video storage medium at different positions thereof and wherein the index is adapted to be read and displayed on a television screen, enabling the selection of one or more of a plurality of scenes of the recorded content.
24. A video storage media control system as claimed in anyone of claims 17 to 23 in which selection of the material to be recorded is selected from an electronic programming guide.
25. A video storage media control system as claimed in anyone of claims 17 to 24 in which the contents of the video media are stored in memory in the form of one or more images taken at intervals and images which are available for display on screen.
26. A video storage media control system as claimed in claims 22 or 23 or 25 in which each image has an associated sequence of images stored in memory which can be reviewed by a user command.
27. A video storage media control system as claimed in anyone of claims 22 to 26 in which the images comprise a sample of the contents of the video media at periodic intervals of the video medium.
28. A video storage media control system as claimed in anyone of claims 22 to 27 in which the contents of the memory tape include audio signals.
29. A video storage media control system as claimed in anyone of claims 21, 22

or we or 25, 26 or 27 when appendant to claim 20 in which selection provisions allow a user to playback of the video starting from the position of any one of the displayed images.

30. A video storage media control system as claimed in claims 21, 22 or 23 or claims 25 or 26 when appendant to claim 20 in which selection provisions allow the user to mark the displayed images for recording over.
31. A video storage media control system for programming a video storage media device from selections made in a electronic programming guide comprising the steps of :- (1) issuing the necessary commands to the video storage media device to enable it to play the associated media, (2) reading the video media to determine the contents and/or position thereof, (3) using content and/or position related information to determine if sufficient room is available for recording the selections; (4) using the necessary commands to cause said video storage media device to record material based on said selections at a designated position of the media based on calculations of the free space or space marked for overwriting.
32. A video storage media control system as claimed in claim 31 in which the contents and/or position related information is determined by reading data recorded on the tape.
33. A video storage media control system as claimed in claim 31 in which the contents and/or position related information is determined by comparing or verifying a relationship between a sequence of data signals or a data value generated by reading the contents of the tape with a pre-stored sequence of



data signals or data value.

34. A video storage media control system constructed and arranged and adapted to operate substantially as hereinbefore described with reference to anyone of the accompanying drawings.
35. A video tape control system substantially as hereinbefore described with reference to the accompanying drawings.
36. A storage video tape recorded with data and/or file indexes substantially as hereinbefore described and illustrated in the accompanying drawings.
37. A closed loop video recorder or other media device control system for determining the status of a video recorder or other media device, consisting of the steps of, (1) issuing a play command or code or sequence, (2) verifying that signals or data are received, (3) using said signals or data or absence of signals or data to determine if said video recorder or other media device is powered on.
38. A close loop control system as claimed in claim 37 further comprising the steps of, (1) checking that the tape or media position is substantially unchanged from a predetermined position, (2) issuing a record command or code or sequence.
39. A closed loop control system as claimed in 37 or 38 further comprising the step of verifying the signals or data received from said video recorder or other media device correspond to a selected program designated for recording.
40. A system for controlling a video recorder or other media device for selective enabling and disabling of associated functions, comprising the steps of, (1)

periodically assessing the presence or content of signals and/or data output from said video recorder or other media device to determine if device is operating, (2) determining if said video recorder or other media device is scheduled and/or permitted to operate at time of assessing signals and/or data, (3) if required issuing a command or code or sequence to disable said video recorder or other media device by a power off command and/or a stop command and/or a pause or other command.

41. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and video recorder or other media device content, wherein selections are made from said television program content and/or data content from other sources for recording onto video tape or other media whereby calculation of available free space on said video tape or other media is displayed and whereby if insufficient space is available for recording original selections may be modified and/or some or all of the video tape or other media contents may be selected for overwriting.
42. A graphical user interface as claimed in 41 adapted to display the status of items recorded on video tape or other media as to whether the recorded item has been viewed.
43. A graphical user interface adapted to display information relating to one or more video tapes or other media contents, wherein the contents of said video tape or other media is displayed either graphically or texturally according to the category of the recorded material, said category could be the type of

recorded material or whether the item is suitable for a particular age of viewer or whether the items have been viewed or any other criteria.

44. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content, wherein said display information comprises a visual representation such as a picture indicating the contents of said television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content.
45. A graphical user interface as claimed in claim 44 in which said visual representations are stored in memory, at least temporarily, to permit on screen display.
46. A graphical user interface as claimed in claim 44 or 45 wherein the graphical user interface is adapted to display television program content information by category such as what is currently showing and/or what will be showing next and/or what is showing that day and/or what will be showing that week.
47. A graphical user interface adapted to display information as claimed in claims 44, 45 or 46 further adapted to filter said television program content by category of user preference such as channel number or type of television program or other category.
48. A video recorder or other media device index generation method comprising the steps of, (1) recording a television broadcast, (2) recording in a memory means a copy of subtitling or closed caption data, (3) using said subtitling or

closed caption data to search for key words or phrases to identify a scene from one or more video tapes or other media corresponding to said key word, (4) issuing a command or code or sequence to position said video tape or other media at the scene corresponding to said key word.